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ABSTRACT

A literature review reports on three studies concerning the antecedents of student verbal participation in the classroom. In the first study, the following research questions were probed: (1) In what situations are students most willing to communicate in the classroom? (2) What is the relationship between willingness to communicate and a students' self-report of cumulative GPA? and (3) Are there differences in responses to individual willingness to communicate items across academic standings, majors, and genders? Subjects for the study were 111 undergraduate students at a midwestern liberal arts college. Methodology consisted of survey questions. Results showed that students are most likely to talk when they are interested in the topics of the course and discussion, when they are prepared for class, when the class is small, and when they are graded for participation. Statistically significant correlations were not found among the elements examined for the other two questions. The second study (with 111 undergraduates) asked whether teacher verbal immediacy behavior positively related to student willingness to communicate. Methodology was similar to the first study. Results showed that teacher verbal immediacy conceptualized as a global measure correlated positively with overall willingness to communicate. The third study (with 91 undergraduates) examined interaction among teacher immediacy behavior, teacher gender, and student gender. Again, methodology was similar to the first study. Results showed that both verbal and nonverbal immediacy correlated positively with the study's measure of classroom participation. (Contains 20 references.) (TB)

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CLASSROOM SITUATIONS WHICH LEAD TO STUDENT PARTICIPATION

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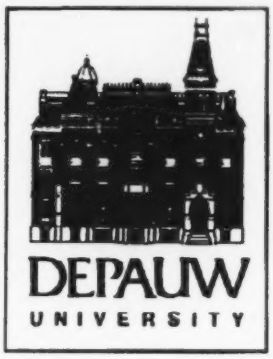

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Abstract

This essay examines the antecedents of student verbal participation in the classroom. Topics include situations in which students are most and least likely to participate in class discussions, the relationship between professor verbal immediacy and classroom participation, and the interaction of immediacy, gender, and classroom participation.

Introduction

Frank E. X. Dance makes clear, through much of his writing and across his career, that speech clarifies thought (e.g., Dance & Zak-Dance, 1994). Similarly, Robert O. Weiss, in his book Public Argument (1995), describes an ideal "public sphere" in which truth is negotiated by people through discourse. As clear-thinking, truth, and, ultimately, knowledge are noble goals for any classroom teacher, teachers should be deeply interested in ways to promote talk in the classroom. Talk in the classroom comes in many forms, from questions for the teacher to answer, to answers for questions which the teacher has posed, to the debate and discussion of critical issues. This essay is about the antecedents of these kinds of talk in the classroom, with a focus on teacher-controlled situations and behaviors. We will present three studies of classroom participation and, hopefully, offer some guidance into how teachers can increase the level of student talk in the learning process.

For purposes of this study, "classroom participation" is any verbal communication between the teacher and the students and between one or more students regarding topics of the course. This includes, but is not limited to, presentation of information, statements of opinion, questions posed, and questions answered. We include the dimensions of both teacher-to-student and student-to-student talk in our definition because "peer interaction has important benefits and is a critical variable in learning and cognitive development" (Ahern, Peck, & Laycock, 1992).

Participation in the Classroom

"No matter how informed you are, you will be of no value to the group unless you share your information" (Leth & Vandemark, 1977, p. 34). The importance of classroom discussion, while cursorily acknowledged, seems to be very often skimmed over by teachers as an ingredient for increased and improved learning, especially at the undergraduate level. A possible cause for this disregard could be

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the lack of understanding of the multiple functions that classroom discussion can serve to the student as well as the teacher.

Presenting Ideas

Dance (1990) tells us that any participation at all is an act on the part of the student that both clarifies the student's thinking as well as the student's ability to present the results of that thinking to others. As we hear another speak, as we formulate our own thoughts, as we present those thoughts to others, we are continually refining our conceptual processes. In this way, classroom participation, in all of its forms, is a benefit to speaker and audience alike. When a student speaks in the classroom, literally, that student is "speaking his or her mind" (Dance & Zak-Dance, 1994).

Clarifying Instructions

A rather obvious need for communication and information-sharing within the classroom is relaying instructions to the class. Civikly (1992) notes that both students and teachers play a role in instruction clarification. Style of teaching and communication of the teacher affect how clearly a student interprets instructions as well as what approach students will take in their problem-solving processes. External variables, such as interest in class, also help decide how well students will comprehend the instructions they are given. Students may be more likely, depending on the variables involved, to participate and discuss or raise questions regarding their misunderstandings of the instructions (Civikly, 1992). Interaction of this type seems essential for achieving full comprehension of the task at hand and, in turn, increasing conceptualization and learning of new ideas.

Communicating in Small-groups

Larson and LaFasto (1989) highlight the value of effective collaborative work and point out that nearly any problem can be solved if people can find a way to work together. By definition, collaboration requires participation. Just about any academic area benefits from group assignments, whether that assignment is discussing the Civil War, designing an electronic circuit, or deriving a mathematical proof. More than just learning facts, academic work should also involve working with others to creatively analyze and solve problems and develop new and innovative ideas. With these critical factors in mind, it is imperative to the process of education that professors understand and recognize what variables will lead students to more freely share their ideas in the small group.

Debating

Weiss (1995) promotes classroom debate as an ideal teaching tool. Mentioned above, his book Public Argument describes a number of ways that debate can be used to examine issues and bring the classroom to life. Making formal argument available to all, Weiss points out that debate is more than just a forensics event. Weiss uses debate in the classroom to help students realize that they can influence public opinion, think logically, and present their honest convictions. Also important, students come away from debates having thoroughly participated in both the "world of human communication" and the "world of democratic values."

Variables Affecting Participation

Apprehension

A recent study conducted by Aitken and Neer (1993) examined "the role of apprehension and motivation in student questioning." As explained in Aitken and Neer's review, Newcastle (1970) revealed that inquisitive and intelligent questions and responses aid in increasing cognitive skills and interest in learning. Also mentioned in the same review, Gall (1970) suggested that question-asking heightened student thinking as well as student learning. Aitken and Neer focused on several different issues regarding question-asking behavior and found that communication apprehension is one of the major reasons that students do not ask questions in a classroom setting.

Interestingly, only twenty percent of college students can be classified as having communication apprehension, yet the majority of students refrain from asking questions in a classroom setting (Aitken & Neer). Aitken and Neer sought other variables which must be causing students to abstain from question-asking. Factors such as achievement, communication ability, and being prepared

for class all affected the student's motivation. The results revealed that a student's level of motivation plays a larger role in question-asking than does communication apprehension. Suggestions to help prompt question-asking in students included an emphasis on indirect questioning methods, emphasizing task accomplishment rather than social development early in the course, and making student-faculty conferences mandatory (Aitken & Neer, 1993). These suggestions should be more useful than focusing on apprehension in increasing a student's overall willingness to communicate in class.

Class Size and Structure

Wong, Sommer, & Cook (1992) published the results of a seventeen-year study which examined the effects of classroom size and structure on student participation. On the basis of past studies, the researchers devised several experimental-type classroom situations. Sommer concluded from earlier research that more participation occurred when students sat across from the professor and around tables as opposed to being seated in straight-rows (Sommer, 1972, cited in Wong, et al.). With this in mind, Sommer constructed a "soft classroom" setting to attempt to increase participation. The experimental room was more compact and aesthetically pleasing than a typical straight row classroom. The study concluded that there was a significant relationship between the style of the room and participation. They showed that there was increased student volunteering and student interaction with other students in the soft classroom. After 17 years with only a few minor problems, the soft classroom continues to realize its original goal of increased student interaction (Wong, et al.).

Seating location proved to be another possible class structure variable affecting student participation. Montello's (1988) review of literature concluded that sitting in the front and center of a classroom yields the most participation. Seating may also determine the way a student feels toward the instructor, as students who sit in the front have a better attitude toward the teacher than those who sit in the back. This increased participation may be because "they participate more out of a desire to bolster their images in the eyes of the instructor or out of a desire not to appear inattentive or rude" (Montello, 1988). Eye contact also affected student participation. The easier it was for a student to make eye contact with the professor, the more likely it was that the student would participate. Finally, Montello found that classroom achievement was only slightly affected by location; nonetheless, seating location did appear to significantly affect participation.

Teaching Style

A study conducted by Stephen (1981) approached motivation to communicate in the classroom as a possible result of teaching style. The study mapped the outcomes of two postgraduate classes over four years with an alternative type of teaching style, and the results appeared to be positive. The objective of the course was for students, working alone or in small groups, to write and present essays clearly explaining research papers to their classmates while incorporating aspects of management into their presentations. Although the students admitted that the classes had a greater work load than most classes, they liked the method of teaching. It allowed for increased involvement, interaction, participation, and learning as compared to the basic lecture style of teaching. The teacher attempted to play the role of a fellow student rather than an instructor. He felt the students had a very in-depth knowledge of the subjects they were studying and were very excited about learning. One thing both the students and the teacher found to be true was that this method was most effectively executed in a smaller class (Stephen, 1981).

Adding an electronic dimension to teacher style concerns, Ahern, Peck, and Laycock (1992) examined teacher discourse and its affects on student participation in a computer-mediated discussion. An alternative form of education, computer-mediated communication (CMC) involves classroom-like discussion sessions done through a computer program. Three styles of interaction were simulated for the study: questions only, statements only, and conversational. As the hypothesis predicated, the conversational style caused students to give more elaborate and insightful responses than the other two types of discourse. Conversational discourse rendered larger amounts of peer to peer interaction which is critical to cognitive development. "The results indicate that the style of discourse used by the instructor is the most important factor in determining the amount of student participation as well as improving the quality of responses..." (P. 306).

Study 1: Situations in Which Participation Occurs

The first of our studies sought to specify the basic situations in which people choose or choose

not to participate in various forms of classroom talk. Miscellaneous variables related to the classroom situation, the teacher, and the subject were included based on the review of literature and interviews with students about what relates to classroom participation. Grade point average (GPA), academic standing, gender, and major were considered as well for the study. Our goal was to get a baseline view of when and why participation occurred before focusing our attention more specifically on teacher behavior.

RQ 1: In what situations are students most willing to communicate in the classroom?

RQ 2: What is the relationship between willingness to communicate and a student's self-report of cumulative GPA?

RQ 3: Are there differences in responses to individual willingness to communicate items across academic standings, majors, and genders?

Methodology

Subjects

Subjects for this study were 111 undergraduate students at a midwestern liberal arts college. The researchers recruited these subjects from 5 introductory level classes. The sample consisted of 63 females and 48 males, ranging from first year students to seniors. All 111 surveys were usable.

Instrumentation

Willingness to Communicate was measured with a survey consisting of twenty-five questions asking what percentage of the time a student would be willing to participate in class under each specific condition. The scale was modeled after a "Willingness to Communicate" scale prepared by McCroskey and Richmond (1987, cited in Frey, Botan, Friedman, & Kreps, 1991). We developed the survey questions through interviews with students about what they believed were situations in which voluntary classroom participation would occur. The questions focused on numerous variables such as interest in class or topic, motivation, similarity to the rest of the students, similarity to the teacher, and even classroom variables such as seating arrangement. Cronbach's alpha for the entire scale was .92. The survey also requested general information such as gender, year in school, major, and GPA.

The survey was scored on a percentage scale, anchored by 0 being "never choose to communicate" at one end and 100 being "always choose to communicate" at the other end. The subjects were asked to answer the questions based on their classes in general rather than on a particular class. All students were informed that they were not obligated to participate in the study, and any students in two of the surveyed classes were asked not to answer the survey more than once.

Results-Study 1

RQ 1

The top five and bottom five items for percent of time a student would choose to communicate in class are listed in Table 1. For teachers seeking ways to directly influence the amount their students talk in class, of the top-five items, only grading on participation seems to be in direct control of the teacher. Students are most likely to talk when they are interested in the topics of the course and discussion, when they are prepared for class, when the class is small, and when they are graded for participation. Students are least likely to participate when their views differ from those of the professor, when the professor is of the opposite gender, and when no one else is talking.

What else can the professor control? While some professors do have the luxury of limiting class size, more teachers simply live with what numbers they get. It is possible for the teacher to influence the students' interest in the discussion, through enthusiastic delivery, one would suppose, and/or the choice of alluring examples and explanations. Similarly, the motivational professor could recruit students into "liking" the course. Having strong implications for our next study, all of these talk situations seem to reside in the realm of teacher immediacy! As far as talk in the classroom is concerned, silence appears to love company, as the situation in which people are least likely to talk is when the classroom is silent. Many professors just fill in the silence with lecture and don't wait for a quiet class to speak.

Table 1

Percent of Time Students Choose to Talk

Top-Five Items	Percent / St.Dev.
When you are interested in the discussion.	89.7 / 12.9
When you like the course topic.	88.6 / 13.9
When you are prepared for class.	84.7 / 14.8
When the class is small.	84.2 / 17.3
When you are graded on participation.	83.0 / 18.5

Bottom-Five Items	Percent / St.Dev.
When you have a different view from the professor.	61.2 / 24.6
When the professor is of the opposite gender.	55.3 / 20.1
When you sit in the back of the class.	53.4 / 21.4
When the professor is attractive.	52.7 / 26.0
When no one else is talking.	52.5 / 29.1

We wonder why students would be relatively hesitant to talk in a class with an "attractive" professor? Averages for student genders on this item are nearly identical, so perhaps male and female students, alike, are anxious about making a poor impression on an attractive teacher? Or perhaps physical beauty is simply intimidating. Further on situations in which talk is unlikely, classroom setup was a key factor for our subjects, as students sitting in the back of the room apparently don't all that often choose to talk. Though the difference is not statistically significant, female students are slightly more willing to speak in a class taught by a male professor than male students are to talk in a class taught by a female professor, though neither male nor female student is inordinately likely to speak at all in these situations (we plan to address these gender questions later). While debate in class may be useful, it appears that students don't often choose to debate with a professor with whom they disagree. It is sad for us to think that students do not want to argue principles with teachers, but then again, the students are the ones being graded. Caution rules the classroom.

RQ 2

The composite willingness to communicate score correlated positively with self-report of cumulative GPA ($r = .21$, ns), though the correlation was not statistically significant. In a post-hoc test correlating each item score with GPA, we found only one significant correlation. Apparently, students with high GPAs tend to talk more when the professor is attractive ($r = .28$, $p < .04$). Why would students overall choose not to talk when the professor is attractive and students with high GPAs choose to speak up? Type 1 error? Brown-nosing? As the students at the sample university are wont to say... Sucking-up? We leave these questions for the reader to answer, as the implications of the relationship are far too convoluted for us to attempt to untangle here.

Is there no strong relationship between GPA and talking in class? Before drawing this conclusion, is important for us to point out that the study included first-year students in their first semester of study, so 50 of the subjects could not report a GPA; add to this glitch the fact that the discussion data was not normally distributed, with most respondents reporting scores between 50 and 100%. Therefore, we cautiously propose that type-two error is a possibility and look to future studies to sort out this relationship. These results could also suggest that GPA, which is a measure of achievement and cognitive ability, may not be all that highly related to class participation. A student may choose to participate in class for a variety of reasons, and perhaps many of those reasons have no relationship to a student's GPA.

RQ 3

We found no reason to suspect that participation patterns differ along the lines of gender, academic level, or major. Based on equivalent and sufficient comparison groups for gender, we count that as a relatively strong conclusion. As for academic level and even more so for major, we have insufficient data to conclude more than tentative support for the null hypothesis. We were top (bottom?) heavy with first-year students and had few seniors in the sample. Similarly, while several majors were represented,

most students bunched into just a few areas of study. These demographics would make fascinating questions for studies more specifically designed to answer them.

Study 2: Verbal Immediacy and Willingness to Participate

Having established the basic parameters of classroom participation, we sought to focus specifically on teacher verbal immediacy behavior for our second study. Essentially, we were looking for associations between professor behavior and the various items on the second study's "Willingness to Communicate" scale. Teacher immediacy behavior has been used quite frequently in studies of classroom behavior (e.g., Kearney, 1985; Gorham, 1988; Christophel, 1990; Sanders & Wiseman, 1990; and Comstock, Rowell, & Bowers, 1995), and we wanted to know to what extent a dynamic teacher could get students to talk. In addition, for further clarification we examined both grade point average (GPA) and gender as related to willingness to talk in class.

RQ 1: Is teacher verbal immediacy behavior positively related to student willingness to communicate?

RQ 2: Is there a positive relationship between willingness to communicate and student's self-report of cumulative GPA?

RQ 3: Are there gender differences in responses to individual willingness to communicate items?

Methodology

Subjects

Subjects for this study were 113 undergraduate students at a midwestern liberal arts college. The sample consisted of 60 females and 53 males, ranging from first year students to seniors. A number of male subjects were from a single fraternity, and a number of female subjects were from a single sorority. The remainder of the sample was recruited from an "introduction to communication" class. One-hundred and five subjects produced usable data.

Instrumentation

Willingness to communicate was measured with a survey consisting of 18 questions and was developed similarly to the survey used in the first study (McCroskey and Richmond, 1987, cited in Frey, Botan, Friedman, & Kreps, 1991). Researchers employed a student focus group to generate items and refined the initial 25 item list using students from a research methods course both as test subjects and as an expert panel. The final survey contained 18 items with themes keyed to student self-motivation, liking of the professor, class atmosphere, and other students in the class. The survey was scored on a percentage scale, anchored by 0 being "never choose to communicate" at one end and 100 being "always choose to communicate" at the other end. Cronbach's alpha for the final scale was .94.

Researchers operationalized teacher verbal immediacy with verbal immediacy items from Gorham's (1988) "Immediacy Behavior Items Survey." Subjects responded on 5-point Likert scales ranging from "never" to "very often," pertaining to how often the listed behavior described the professor. Cronbach's alpha for the scale was .88.

Researchers asked subjects to respond based on the last class they had attended and the professor teaching it (Richmond, Gorham, & McCroskey, 1987). All students were informed that they were not obligated to participate in the study, though all subjects elected to participate. The survey contained items requesting general information such as gender, year in school, major, and GPA.

Results-Study 2

RQ 1

As expected by the researchers, teacher verbal immediacy, conceptualized as a global measure, correlated positively with overall willingness to communicate ($r = .19$, $p < .05$). To assess the relationship between immediacy and willingness to communicate more precisely, the researchers calculated the relationship between immediacy and individual willingness to communicate items.

The strongest relationship was between immediacy and willingness to communicate when the class was engaging in an open discussion ($r = .31$, $p < .001$). Subjects also reported that they were more likely to participate when a highly immediate professor was discussing assignments ($r = .25$, $p < .01$).

While the small class is more likely to produce student talk in the first place, these intimate learning contexts are even more likely to lead to student involvement when the professor is high in verbal immediacy ($r = .22$, $p < .02$). When a class is engaged in a heated debate led by a professor who is high in immediacy, students respond that they are more likely to jump into the fray ($r = .22 < .02$). Other significant correlations with verbal immediacy were participating when the professor enthusiastically asks for a response from the class ($r = .22$, $p < .03$); when the professor is enthusiastic about the subject ($r = .20$, $p < .04$); and when everybody else is talking ($r = .19$, $p < .04$).

What we notice most about these results is that they reveal an intimate relationship between professor behavior and a classroom situation which, on its own, motivates talk by definition. A highly immediate professor sets the stage for participation through assignments (e.g., debates), enthusiastic repartee, and, quite simply, by inviting participation in the first place. All of these correlations are low, but they all point in the same direction: The teacher determines the level of student verbal participation in class (note that, as before, data for the willingness to talk scale was left-skewed). Even the small class, which our first study reinforced as a comfortable environment for student talk, is brought to life by a highly immediate professor.

RQ 2

As with the first study, a statistically significant correlation eluded us on this question, though the relationship was still positive ($r = .15$, $p < .16$). We recognize the need to refine the measurement of verbal participation in the classroom, and feel that this question will not be satisfactorily answered until this refinement has been accomplished.

RQ 3

The only gender difference we found was for women who were more likely to talk when the professor is willing to respond to stupid questions ($t = 2.14$, 101 d.f., $p < .04$). All other variables do not differ from gender to gender.

Study 3: Gender, Immediacy, and Willingness to Participate

In our third study, we shifted the focus from a multidimensional conceptualization of classroom talk, and substituted a single item global measure of how much a student participates in class. Further, we examined the interaction effects of immediacy behavior and gender, both of teacher and student. While to this point, we had uncovered no differences across genders, we had not yet factored the gender of the instructor into the equation. We wondered whether or not the effects of immediacy held for both genders of student and for both genders of teacher.

RQ 1: Is teacher immediacy behavior positively related to a student's participation in class?

RQ 2: What is the interaction among teacher immediacy behavior, teacher gender, and student gender for the dependent variable of classroom participation?

Methodology

Subjects

Subjects for this study were 91 undergraduate students at a midwestern liberal arts college. To ensure a more evenly distributed sample of students, majors, and professors, the researchers selected one class from each of the academic buildings on this small-college campus for sampling. The sample consisted of 42 females and 49 males, including all academic standings (and then some!). The sample represented 26 female professors and 62 male professors, roughly equal in proportion to the campus population.

Instrumentation

The researchers measured willingness to communicate with a single item asking the students to assess, on a scale from 0 to 9, how much they were participating in class. Anchors for this item, patterned after Christophel's (1990) single item measure of learning, were 0 "did not participate at all" and 9 "participated more than any other class taken.".

Researchers operationalized teacher immediacy behaviors with scales used by Gorham (1988) and Richmond, Gorham, and McCroskey (1987). Subjects responded on 5-point Likert scales ranging from "never" to "very often," pertaining to how often the listed behavior described the professor. Cronbach's alpha for the verbal scale was .84, and alpha for the nonverbal scale was .83.

Researchers asked subjects to respond based on the last class they had attended and the professor teaching it (Richmond, Gorham, & McCroskey, 1987). All students were informed that they were not obligated to participate in the study, though all subjects elected to participate. The survey contained items requesting general information such as gender of student, gender of professor, and year in school.

Results-Study 3

RQ 1

Both forms of immediacy, verbal ($r = .67$, $p < .001$) and nonverbal ($r = .62$, $p < .001$), correlated positively with this study's measure of classroom participation. This relationship reinforces the findings of study two, but adds a statistical exclamation point. Why the difference in the strength of the relationship? In the previous study, recall that the distribution of the participation data was nonnormal; however, the data for this study, based more on attitude toward participation than on an estimate of actual participation, was much closer to normal in distribution. Perhaps this refinement of data accounts for the greater strength of this result. Also important for consideration, of the convenience samples used for all of these studies, the sample in this third study was the most evenly distributed across students and professors. Do both forms of immediacy relate to classroom participation? The answer from this study is an unequivocal yes.

RQ 2

As the various interactions among student gender, professor gender, and immediacy are examined, the results become quite interesting, indeed. When female students are in class with professors who are male, nonverbal immediacy correlates with willingness to participate at .75 ($p < .001$), and verbal immediacy correlates at .85 ($p , .001$). Striking as this relationship may seem, contrast it with the fact that for female students in class with female professors, the strength of the correlation drops to .30 (ns) for both immediacy variables. In other words, when female students are in class with male professors, the two types of immediacy behavior combined account for more than 72 percent of the variance in participation. On the other hand, the decision to participate when females are in class with female professors is only partially explained by immediacy (9 percent); and, thus, open to influence from variables not examined in this study.

When male students are paired with male professors, nonverbal immediacy correlates with participation at .52 ($p < .004$), and verbal immediacy correlates at .64 ($p < .001$). Though not as strong as the relationship for women, the trend is still obvious: immediacy behavior is related to the student's willingness to participate in class. But, when male students are paired with female professors, the strong relationship evaporates. In this case, nonverbal immediacy correlates with participation at .22 (ns), and verbal immediacy correlates with participation at .05 (ns). This result is intriguing.

Clearly, both male and female students relate to female professors differently than they relate to male professors. A considerable body of research exists establishing that the genders have different styles of communicating; but why would both male and female students respond differently to those styles? This intriguing question begs for further research to tease out the relationships among gender, teaching, and learning.

While immediacy is a relatively benign variable with female professors, it is certainly a key factor for male professors. Based on these results, a male professor's behavior can effectively shut the door on a female student's verbal participation in class. We are mindful of the potential for a one-way power relationship in the classroom and feel that a high-immediacy style leads, by definition, to power sharing. When the professor shares power, then the students will accept that power and contribute ideas to help direct the conceptual flow of class. As the professor detaches from the students, again indicated by low-immediacy, HE takes power unto HIMself, and the students abdicate, becoming silent witnesses to education rather than active participants.

Discussion

Through these studies, the researchers attempted to determine what specific classroom settings and conditions have an effect on participation and achievement, research which can potentially aid in improving the amount and quality of both variables. We have fallen short of the goal of proving a statistically significant relationship between participation and achievement, but we feel that future research will be able to bring the relationship between these variables into focus. Specifically, refined

measures of participation, perhaps using attitude-based scales rather than estimates of amount of participation, will help in the quest. Also, identifying the factor structure of the participation variables will help a great deal in specifying when and why people participate in class and what effect that participation has on learning of all kinds.

What we have clarified are the situations in which individuals participate in class. Keeping classes small, adapting discussion questions to student interests, and grading on participation all can help; and all of these factors are at least partially under the professor's control. Also, a professor would be wise to exercise caution when dealing with opposing viewpoints. Directly under the professor's control is how he or she deals with students. By opening up to the students, sharing power, and identifying with students and their needs, the professor can maximize his or her ability to engage students in discourse of all kinds.

Without a doubt, these results present interesting ideas for future research in this area. Mentioned earlier, we need to refine the self-report measure of classroom participation, and we need to know the factor structure for the participation variables. Though our third study establishes that professor gender and immediacy explain a great deal of variation in participation, what other factors affect participation? Does personality have an affect on a student's participation in class? Can a personality effect be carried over to discussion behavior for people in general? Does student participation have an effect on how the teacher views the student? Does that view in turn affect teacher immediacy? Finally, future research on this topic should take into consideration communication apprehension.

The researchers for this study have all experienced the positive effects of increased classroom participation. We can honestly say that the classes for which we retain a better understanding and memory of the material are classes in which all students engaged openly in discussion, argument, and analysis. As students and professors, we are bombarded daily with hundreds of bits of information. With the need to learn as much as possible from what is placed in front of us, how can we not be interested in finding a way to hold onto as much of this information as possible? If classroom participation will help facilitate this task, it is vital that we discover ways to make classroom participation not a fear, but an effective learning tool for students at every level of education.

References

Ahern, T. C., Peck, K., & Laycock, M. (1992). The effects of teacher discourse in computer-mediated discussion. Journal of Education Computing Research, 8(3), 291-309.

Aitken, J. E., & Neer, M. R. (1993). College student question-asking: the relationship of classroom communication apprehension and motivation. The Southern Communication Journal, 59(1), 73-79.

Christophel, D. M. (1990). Teacher immediacy behaviors, student motivation, and learning. Communication Education, 39, 319-336.

Civikly, J. M. (1992). Clarity: teachers and students making sense of instruction. Communication Education, 41(2), 138(15).

Comstock, J., Rowell, E., & Bowers, J. W. (1995). Food for thought: Teacher nonverbal immediacy, student learning, and curvilinearity. *Communication Education, 44*, 251-266.

Dance, F. E. X. (1990). Speech and thought: Two competencies- one performance. Paper presented at the annual convention of the Speech Communication Association, Chicago.

Dance, F. E. X., & Zak-Dance, C. C. (1994). Speaking your mind: Private thinking and public speaking. Dubuque, IA: Kendall Hunt.

Frey, L. R., Botan, C. H., Friedman, P. G., & Kreps, G. L. (1991). Investigating communication: An introduction to research methods. Englewood Cliffs, NJ: Prentice Hall.

Gorham, J. (1988). The relationship between verbal teacher immediacy behaviors and student learning. Communication Education, 37, 40-53.

Kearney, P. (1985). Teacher immediacy for affective learning in divergent college classes. Communication Quarterly, 33, 61-74.

Larson, C. E., & LaFasto, F. (1989). Teamwork. Newbury Park, CA: Sage.

Leth, P. C., & Vandemark, J. F. (1977). Small Group Communication. Menlo Park, CA: Cummings.

McCroskey, J. C., & Richmond, V. P. (1987). Willingness to communicate. In J. C. McCroskey & J. A. Daly (Eds.) Personality and interpersonal behavior (p. 135-136). Beverly Hills: Sage.

Montello, D. R. (1988). Classroom seating location and its effect on course achievement, participation, and attitudes. Journal of Environmental Psychology, 8(2), 149-157.

Richmond, V. P., Gorham, J. & McCroskey, J. C. (1987). The relationship between selected immediacy behaviors and cognitive learning. In M. McLaughlin (Ed.), Communication Yearbook 10 (p. 574-590). Beverly Hills: Sage.

Sanders, J., & Wiseman, R. (1990). The effects of verbal and nonverbal teacher immediacy on perceived cognitive, affective, and behavioral learning in the multicultural classroom. Communication Education, 39, 341-354.

Stephen, K. D. (1981). Student participation in Communication Courses. Studies in Higher Education, 6(2), 173-176.

Trenholm, S., & Jensen, A. (1992). Interpersonal Communication. Belmont, CA: Wadsworth.

Weiss, R. O. (1995). Public Argument. Lanham, MD: University Press of America.

Wong, C. Y., Sommer, R., & Cook, E. J. (1992). The soft classroom 17 years later. Journal of Environmental Psychology, 12(4), 337-343.